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ROBERT TUCKER.

By GEORGE BRUCE HALSTED.

ROBERT TUCKER was born at Walworth in Surrey on April 26th, 1832. His forefathers were from the Isle of Wight. When at the Woodard School at New Shoreham the temporary head of the school was his cousin, Henry Jacobs, Michel Fellow of Queen's College, Oxford, and it was by his advice that Robert became a candidate for a sizarship at St. John's College, Cambridge (Sylvester's College). The Johnian freshman entered upon his University career in the Michaelmas term of 1851.

In the matter of college examinations the *vivâ voce* and the "Seven Devils" were still in existence.

The Seven Devils was an examination paper in algebra consisting of seven problem-puzzles of the most trying description, in which the data mostly translated themselves into simultaneous equations in an appalling number of unknowns. In the mathematical vivâ voce Tucker remembers being asked to expand tan$x$ in a series. In this cheerful mental exercise he succeeded even beyond the first term. Three years later he was promoted to a Foundation Scholarship, and in the Tripos list of 1855 he was ranked as a Wrangler.

This year was a notable one for Johnian successes; no less than ten Johnians appeared in the first class, including the Senior, second, and third Wranglers. With the second Wrangler, Leonard Courtney, now the Right Honourable Member of Parliament for Bodmin, Tucker took a walking tour, planned to include several of the English battle-fields, Bosworth, Nasby, Worcester, etc.

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The tour was made in a costume of Courtney's own designing, which attracted such attention that at Oakham their private room was invaded by the excited populace under the conviction that they were Paddy Noon and Paddy Gell, two noted prize-fighters who were expected.

In February, 1859, he took his M. A., and went as master to the school of J. A. Wall at Portarlington. Among his pupils here was W. M. T. Morgan, who afterward took a brilliant degree at Trinity College, Dublin.

In 1865 University College School had need of a successor to the late G. C. DeMorgan as Mathematical Master, and chiefly through the warm support of his candidature by Todhunter, Mr. Tucker was chosen. In the same year was founded the London Mathematical Society, and in October Mr. Tucker was elected a member. This was soon followed by his election to the Council, and, in November, 1867, by his appointment to the Honorary Secretaryship. This office he holds to the present day, having now been sole editor of seven hundred numbers of the Proceedings of the London Mathematical Society. In April, 1866, he married Elizabeth, the only daughter of William Byles, of Freshwater. They have three daughters.

The year 1871 saw a new undertaking in the shape of the Association for the Improvement of Geometrical Teaching. Mr. Tucker was Local Secretary for London, and subsequently Honorary Secretary and Vice President.

He has contributed to the mathematical columns of the *Educational Times* with scarcely an intermission from 1863. His memorial and biographical notices of Gauss, Chasles, Spottiswood, and Hirst together with reviews of many mathematical works, may be found in *Nature*. For Cayley's paper on Sylvester in that journal Mr. Tucker supplied the biographical details, with which it is important to note that Sylvester was satisfied, as he called upon Mr. Tucker and struck out only one insignificant detail.

As a geometer. Mr. Tucker is widely known as one of the creators of "Recent Geometry," or the modern Geometry of the Triangle, the Lemoine-Brocard Geometry. His name in this regard finds itself in honorable association with those of Brocard, Lemoine, and Neuberg.

There is a family of circles now universally known as "Tucker's Circles." If there be two triangles with parallel sides, their vertices upon copunctal straights, crossing on their common symmedian point. Then the six intersections of their sides are concyclic on a "Tucker's Circle."

Though the majority of University College School boys went in for engineering or a London University Degree yet the showing of Mr. Tucker's pupils at Cambridge is still very remarkable, witness the following :
1866. Ogle, 29th Wrangler.
1867. Puller, 19th Wrangler.
1874. W. W. Rouse Ball, 2d Wrangler and First Smith's Prizeman. (This is the well-known historian of mathematics).
1875. Saunder, 14th Wrangler.
1877. Kikuchi, 19th Wrangler. (The first Japanese Wrangler). [Since

Professor of Mathematics in the Imperial University, Tokio, and now its presi-
dent. Member of the Japanese House of Lords. Author of a Geometry in
English and Japanese].

1878. Sargant, 7th Wrangler.

1878. Leverson, 15th Wrangler.

1879. Karl Pearson, 3rd Wrangler. [The celebrated writer on the
mathematics of Evolution and Darwinism].

1883. Romer, H. S., 20th Wrangler. [Brother to Ld. Romer, Senior
Wrangler in 1863].

1885. Berry, A., Senior Wrangler and 2d Smith's Prizeman.

1886. Hooker, J. H., 29th Wrangler.

1887. Norris, J. R., 16th Wrangler.

1890. Bennett, G. T., Senior Wrangler and First Smith's Prizeman.

1890. Vaughan, A., Bracketed 3rd Wrangler.

1892. Kirby, S. F., 12th Wrangler.

1892. Clay, R. G., 21st Wrangler.

1895. Schroder, H. M., 29th Wrangler.

F. W. Frankland, the eminent writer on non-Euclidean Geometry (now
an Actuary in New York) was a favorite pupil.

Lady Gwendolen Cecil, daughter of Lord Salisbury, read three seasons
with Mr. Tucker, showing fine mathematical abilities.

A mere list of the writings of Mr. Tucker would give no adequate idea of
their value. We may mention almost at random his Appendix to the Proceed-
ings of the London Mathematical Society No. 279 containing Conjugate "Tucker"
Circles. The Index to the Proceedings gives the titles of fifteen papers, ending
with "Some Properties of Two Tucker-Circles."

In 1883 Mr. Tucker rediscovered Lemoine's circle and wrote a paper on
it in the Quarterly Journal under the title: The "Triplicate-Ratio" Circle;
which may be said to have started the general English interest in this new de-
velopment of geometry.

Mr. Tucker did a fine piece of work in editing Clifford's Papers and his
Dynamics Part II.

All the world will rejoice that as a result of a petition sent in to Mr. Bal-
four by the principal mathematicians of England, the Queen has granted Mr.
Tucker a Civil List pension of forty pounds a year. The money is little, but
such recognition of services must be highly gratifying to a loyal Briton.